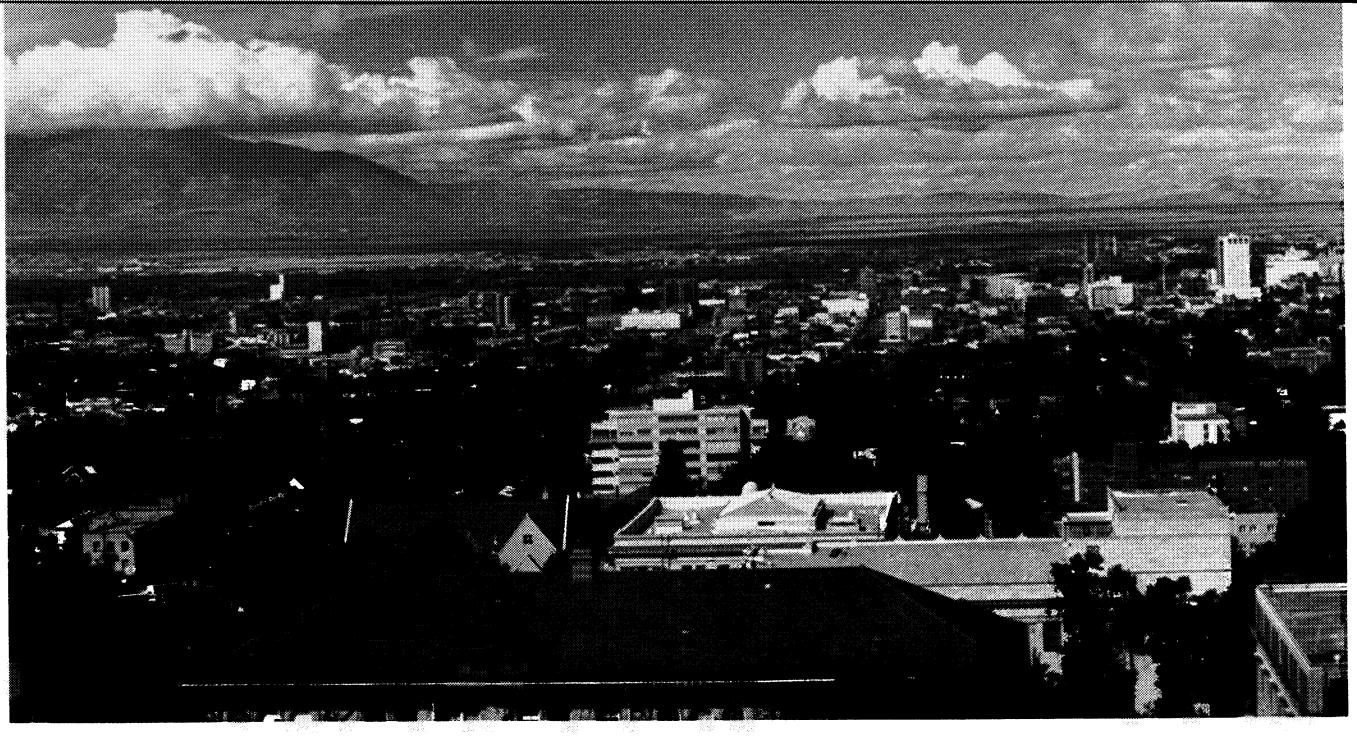

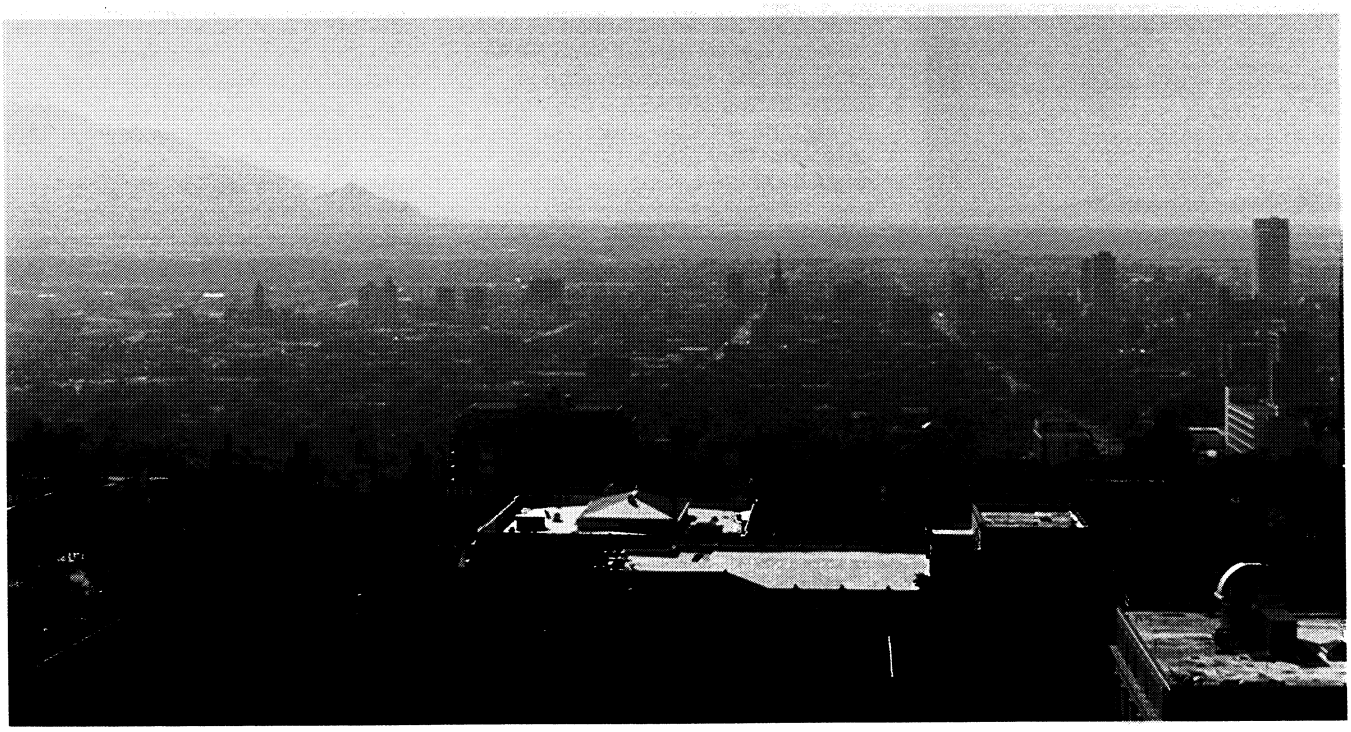

## Visibility Studies

The accompanying photos are near-identical views from the campus of the University of Utah in Salt Lake City—except for the visibility. In the upper photo, taken on a clear day, the mountain range in center background—60 miles distant—is distinctly visible. It is totally obscured in the hazy day photo, in which the most distant features discernible—the mountains at left—are only 15 miles away. Comparison photos like these are used in atmospheric visibility studies conducted by the Environmental Studies Laboratory of the University of Utah Research Institute. The studies are part of a broader research program which embraces investigations of the effects of air pollutants on vegetation; air quality in arid and semi-arid regions surrounding energy developments; and the amount, size and type of particulates in the atmosphere.

In its visibility studies, the laboratory uses a computer program supplied by NASA's Computer Software Management and Information Center (COSMIC)®, located at the University of Georgia (see page 66). Called RADTMO, for Radiative Transfer Models, the COSMIC program computes the characteristics of scattered radiation in the atmosphere, including ozone concentration and aerosol density at various altitudes. These calculations provide information used in determining sky color intensity for visibility modeling under different atmospheric conditions. Through use of RADTMO, which was developed by Goddard Space Flight Center, the laboratory was able to avoid the cost of developing a new computer program; no other software capable of providing the necessary calculations was commercially available.

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